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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MUI, GARY

ART UNIT

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2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/719,270	Applicant(s) ADAMCZYK ET AL.	
	Examiner Gary Mui	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 24 – 33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

For claims 24 – 33, the claims are directed to a computer program per se, which is non-statutory subject matter. The claims recite the computer program product comprising program code embodied in a computer-readable storage medium, the claims fails to mention that a “computer readable medium” is stored with, encoded with, or embodied with “computer executable instructions” and without these components the functionality of the claimed invention cannot be carried out.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 – 6, 8 – 10, 12 – 14, 21 – 26, 28, and 30 – 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Raisanen et al. (US 2003/0152028 A1).

For claim 1, Raisanen et al. teaches requesting a level of QoS for communications in the communication network by a QoS request from a service provider; and allocating the requested level of QoS to the service provider based on the QoS request (see paragraph 0064 lines 4 – 17, QoS parameters are sent from a terminal and the QoS manager (QM) will decide and allocate the necessary QoS parameter values).

For claim 2, Raisanen et al. teaches the service provider is a network service provider (see paragraph 0064 lines 4 – 17).

For claim 3 – 5, Raisanen et al. teaches requesting a level of QoS for communications in the communication network comprises requesting a level of QoS by a QoS request from an application of the service provider; allocating the requested level of QoS to the application service provider comprises allocating the requested level of QoS to an application of the service provider; and allocating the requested level of QoS to the service provider comprises allocating a network capacity level for communication in the communication network with the service provider based on the QoS request (see paragraph 0064 lines 4 – 17).

For claim 6, Raisanen et al. restricting communication through the communication network with the service provider to the allocated network capacity level (see paragraph 0064 lines 4 – 17, the QoS parameter values are maximum).

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For claims 8 – 10, Raisanen et al. teaches the allocated level of QoS is based on delay of information; information loss rate; or packet size in the communication network (see paragraph 0040 lines 1 – 4).

For claim 12, Raisanen et al. teaches allocating the requested level of QoS to the service provider comprises modifying a profile of information that is communicated through the communication network based on the allocated level of QoS (see paragraph 0040 lines 1 – 4).

For claim 13 and 14, Raisanen et al. teaches evaluating at a network service manager the QoS that is available in the communication network; and allocating the requested level of QoS to the service provider based on the QoS request from the service provider and the evaluation of the QoS available in the communication network and the network service manager comprises a DSL service manager (see paragraph 0009 – 0012 and 0064 lines 4 – 17, the QM looks at the request and checks if the request can be handled).

For claims 21 – 23, Raisanen et al teaches allocating the requested level of QoS to the service provider comprises notifying a broadband remote access server of the allocated level of QoS; allocating the requested level of QoS to the service provider comprises notifying a routing gateway of the allocated level of QoS; and further comprising notifying the service provider of the allocated level of QoS (see paragraph 0064 lines 4 – 17 and paragraph 0065).

For claim 24, Raisanen et al. teaches use of software for his QoS management system (see paragraph 0078 lines 2 – 7) where the service provider program code that is configured to request a level of QoS for communications in the communication network by a QoS request from a service provider; and QoS allocation program code that is configured to allocate the requested level of QoS to a service provider based on the QoS request (see paragraph 0064

liens 4 – 17, QoS parameters are sent from a terminal and the QoS manager (QM) will decide and allocate the necessary QoS parameter values).

For claim 25, Raisanen et al. teaches the QoS allocation program code is configured to allocated the requested level of QoS to an application program of a network service provider based on the QoS request (see paragraph 0064 liens 4 – 17).

For claim 26, Raisanen et al. teaches the QoS allocation program code is configured to allocate a network capacity level for communication in the communication network based on the QoS request, and further Comprising QoS management program code that is configured to restrict communication through the communication network with the service provider to the allocated network capacity level (see paragraph 0064 lines 4 – 17, the QoS parameter values are maximum).

For claim 28, Raisanen et al. teaches QoS management program code that is configured to shape information flow through the communication network with the service provider based on the QoS request (see paragraph 0059 and 0060 lines 6 – 10 and 5 – 8, respectively, traffic shaper).

For claim 30, Raisanen et al. teaches program code that is configured to identify the service provider that requested the level of QoS, and is configured to evaluate the QoS request based on the identified service provider (see paragraph 0064 lines 4 – 17).

For claim 31, Raisanen et al. teaches program code that is configured to identify an application program of the service provider that is associated with the QoS request, and is configured to evaluate the QoS request based on the identified application program (see paragraph 0064 lines 4 – 17).

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For claims 32 and 33, Raisanen et al. teaches program code that is configured to notify a broadband remote access server of the allocated level of QoS and program code that is configured to notify a routing gateway of the allocated level of QoS (see paragraph 0064 lines 4 – 17 and paragraph 0065).

For claim 34, Raisanen et al. teaches a service provider; an application framework infrastructure; an access network communicatively coupling the service provider and the application framework infrastructure; a plurality of routing gateways; and a wide area network that communicatively couples the application framework infrastructure and the plurality of routing gateways, wherein the service provider is configured to request a level of Quality of Service (QoS) for communication in the wide area network by a QoS request (see paragraph 0064 lines 4 – 17).

For claim 35, Raisanen et al. teaches the service provider is a network service provider (see paragraph 0064 lines 4 – 17).

For claim 36, Raisanen et al. teaches the application framework infrastructure is configured to allocate the requested level of QoS to an application service provider based on the QoS request (see paragraph 0064 lines 4 – 17).

For claim 37, Raisanen et al. teaches the application framework infrastructure is configured to identify at least one of the plurality of routing gateways that communicates with the application service provider, and is configured to notify the identified at least one of the plurality of routing gateways of the allocated level of QoS (see paragraph 0064 lines 4 – 17 and paragraph 0065).

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For claim 38, Raisanen et al. teaches a broadband remote access server, wherein the application framework infrastructure is configured to notify the broadband remote access server of the allocated level of QoS (see paragraph 0064 lines 4 – 17 and paragraph 0065).

For claim 39, Raisanen et al. teaches the service provider is configured to request a level of QoS based on a request from at least one application program that is hosted by the service provider (see paragraph 0064 lines 4 – 17 and paragraph 0065).

For claim 40, Raisanen et al. teaches allocating a different QoS level to each one of a plurality of service providers; and managing communication with each of the plurality of service providers based on the allocated QoS levels (see paragraph 0064 lines 4 – 17, each terminal request and the QM will allocated based on there different parameter values).

For claim 41, Raisanen et al. teaches allocating a different QoS level to each one of a plurality of IP addresses; and managing communication with each of the plurality of IP addresses based on the allocated QoS levels (see paragraph 0064 lines 4 – 17, each terminal request and the QM will allocated based on there different parameter values, it is inherent of the system that each terminal has an IP address).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 7, 17 – 20, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. in view of Katsube et al. (US 2004/0095914 A1).

For claim 7, Raisanen et al. teaches all of the claimed subject matter with the exception of allocating the requested level of QoS to the service provider comprises allocating a communication priority level for communication in the communication network to the service provider based on the QoS request. Katsube et al. teaches that the packets are classified to be enforced or non-enforced (see paragraph 0043 lines 1 – 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have

priority levels as taught by Katsube et al. into Raisanen's et al. QM system. The motivation for doing this is to have a more efficient system.

For claim 17, Raisanen et al. teaches all of the claimed subject matter with the exception of evaluating the QoS service request based on information in a known field in the data packet. Katsube et al. from the same field of endeavor teaches the QoS classification looks at the header information (see paragraph 0043 lines 9 – 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to evaluate QoS based on packet information as taught by Katsube et al. into Raisanen's et al. QM system. The motivation for doing this is to have a more reliable system.

For claim 18, Raisanen et al. teaches all of the claimed subject matter with the exception of identifying a protocol ID in the known field of the data packet; and evaluating the QoS request based on the identified protocol ID. Katsube et al. from the same field of endeavor teaches identifying and evaluating the QoS based on the protocol field (see paragraph 0043 lines 10 – 19). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the protocol field for QoS as taught by Katsube et al. into Raisanen's et al. QM system. The motivation for doing this is to have a more reliable system.

For claim 19, Raisanen et al. teaches all of the claimed subject matter with the exception of identifying a source address and/or a destination address in the known field of the data packet; and evaluating the QoS request based on the identified source address and/or the destination address. Katsube et al. from the same field of endeavor teaches the QoS classification looks at the header information which includes source and destination address (see paragraph 0043

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lines 9 – 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to evaluate QoS based on packet information as taught by Katsube et al. into Raisanen's et al. QM system. The motivation for doing this is to have a more reliable system.

For claim 20, Raisanen et al. teaches all of the claimed subject matter with the exception of identifying a source port number and/or a destination port number in the known field of the data packet; and evaluating the QoS request based on the identified source port number and/or a destination port number. Katsube et al. from the same field of endeavor teaches the QoS classification looks at the header information, which includes port number (see paragraph 0043 lines 9 – 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to evaluate QoS based on packet information as taught by Katsube et al. into Raisanen's et al. QM system. The motivation for doing this is to have a more reliable system.

For claim 27, Raisanen et al. teaches all of the claimed subject matter with the exception of the QoS allocation program code is configured to allocate a communication priority level for communication in the communication network based on the QoS request, and further comprising QoS management program code that is configured to prioritize communication through the communication network with the service provider based on the allocated communication QoS level. Katsube et al. teaches that the packets are classified to be enforced or non-enforced (see paragraph 0043 lines 1 – 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have priority levels as

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taught by Katsube et al. into Raisanen's et al. QM system implemented in software. The motivation for doing this is to have a more efficient system.

Claim Rejections - 35 USC § 103

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. in view of Waclawsky et al. (US 6,628,610 B1).

For claim 11, Raisanen et al. teaches all of the claimed subject matter with the exception of modifying Maximum Transmission Unit size for packets communicated through a network based on the allocated level of QoS. Waclawsky et al. from the same field of endeavor teaches changing the size of the packets in the flow for the communication device (see paragraph 4 lines 55 – 66). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to adjust the packet size as taught by Waclawsky into Raisanen QM system. The motivation for doing this is to have a lower the system complexity.

Claim Rejections - 35 USC § 103

11. Claims 15, 16, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. in view of Goyal et al. (US 6,999,474 A1).

For claim 15, Raisanen et al. teaches all of the claimed subject matter with the exception of evaluating at a network service manager the QoS available in the network comprises validating the QoS request from the service provider. Goyal et al. form the same field of endeavor authenticating the signaling messages and authorize the request for services (see

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column 5 lines 25 – 31). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to validate the request as taught by Goyal et al. into Raisanen's et al. QM system. The motivation for doing this is to have a more secure system.

For claim 16, Raisanen et al. teaches comparing the QoS request to a DSL session data store (see paragraph 0064 lines 4 – 17, the QoS request is compared to the QoS database).

For claim 29, Raisanen et al. teaches comparing the QoS request to a DSL session data store (see paragraph 0064 lines 4 – 17, the QoS request is compared to the QoS database), but fails to teach the validate the QoS request. Goyal et al. form the same field of endeavor authenticating the signaling messages and authorize the request for services (see column 5 lines 25 – 31). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to validate the request as taught by Goyal et al. into Raisanen's et al. QM system. The motivation for doing this is to have a more secure system.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Huang (US 6,212,562 B1), McLampy et al. (US 7,151,781 B2), Edholm (US 2003/0067940 A1), and Razoumov et al. (US 2005/0129063 A1) are cited to show methods, computer program products, and systems for managing quality of service in a communication network for applications.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary Mui whose telephone number is (571) 270-1420. The examiner can normally be reached on Mon. - Thurs. 9 - 3 EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GM

05.09.2002


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER